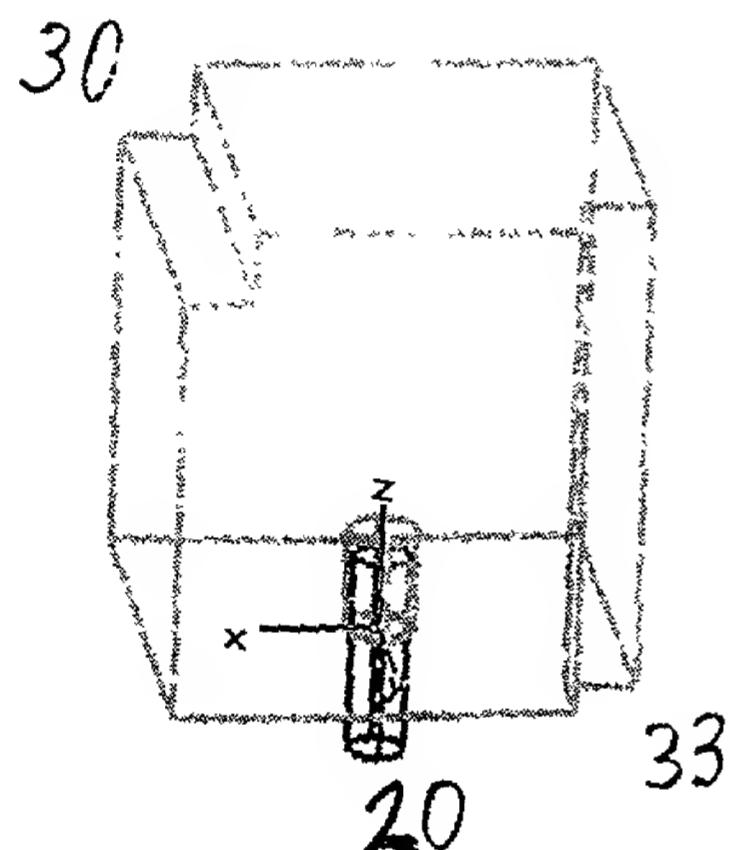


10

(a)



(b)

Figure 1.

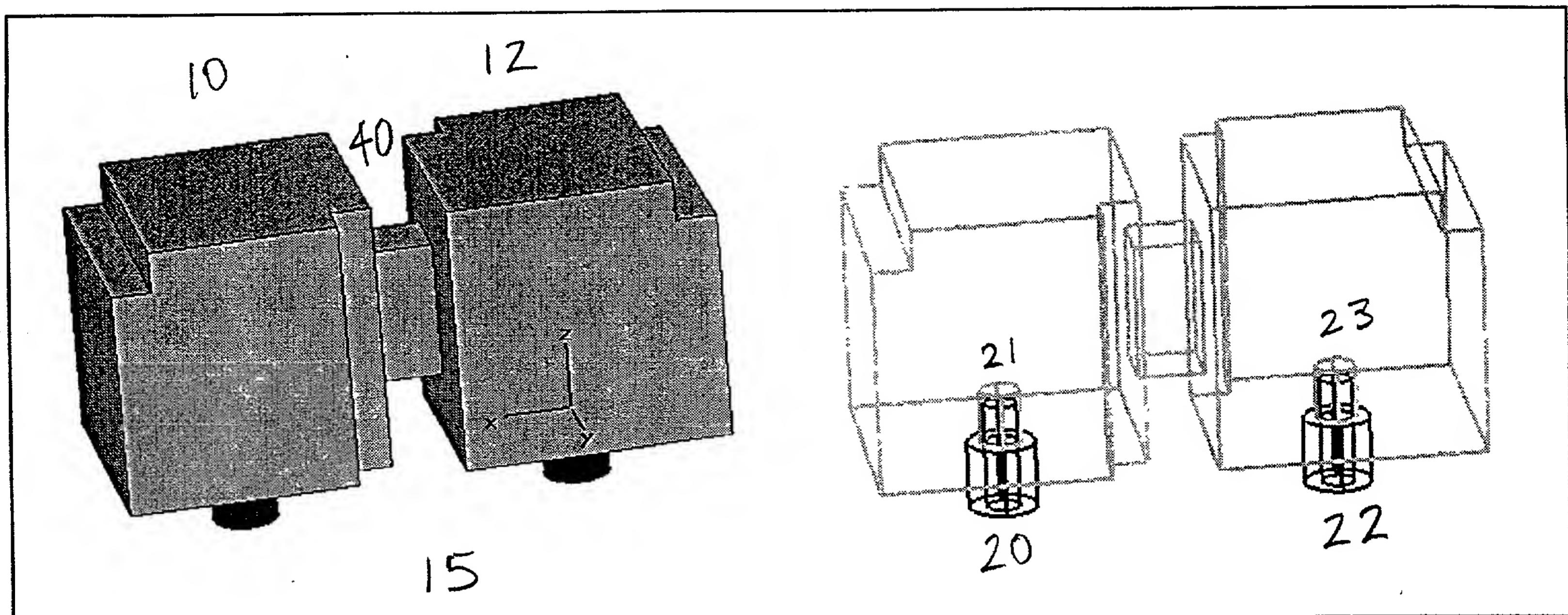


Figure 2.

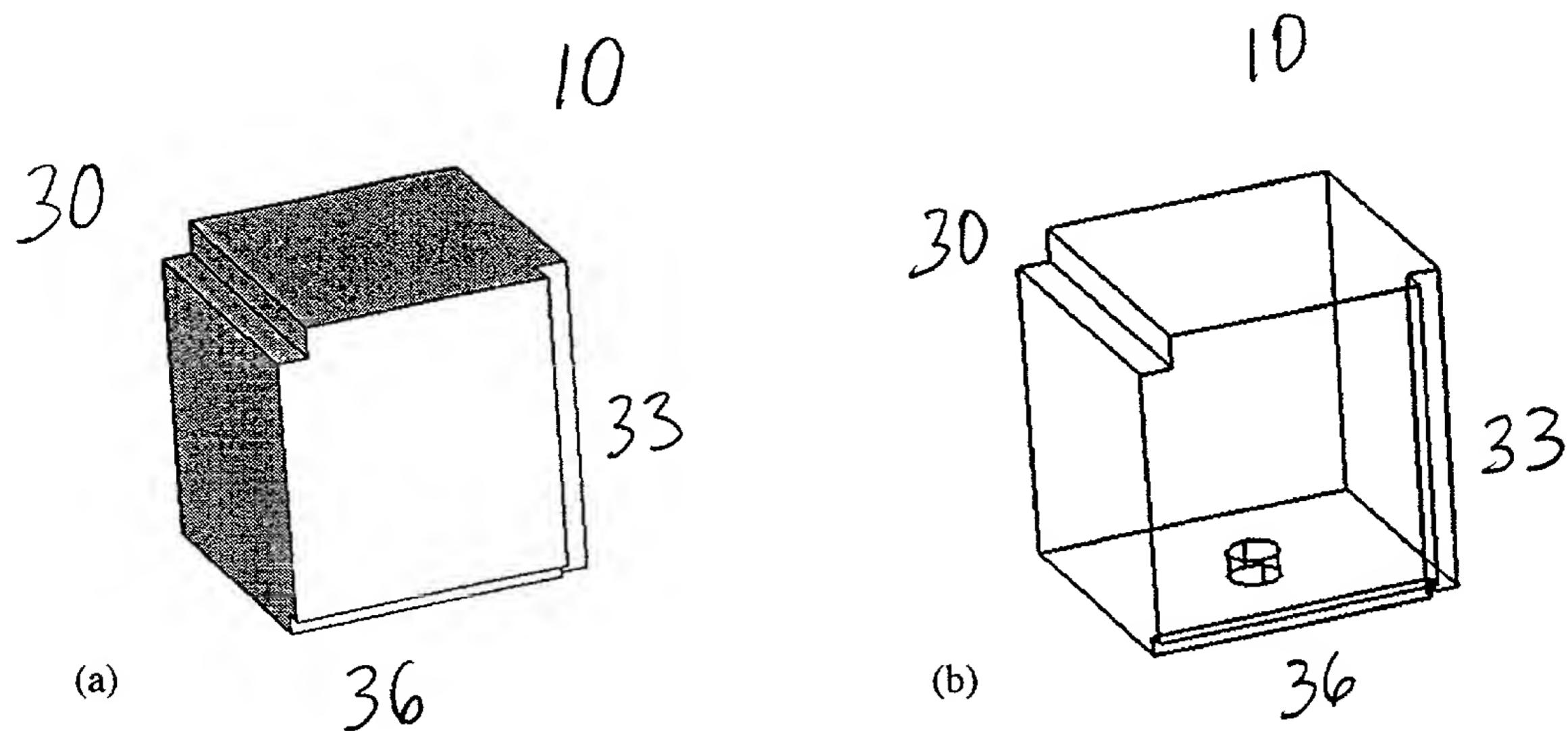


Figure 3.

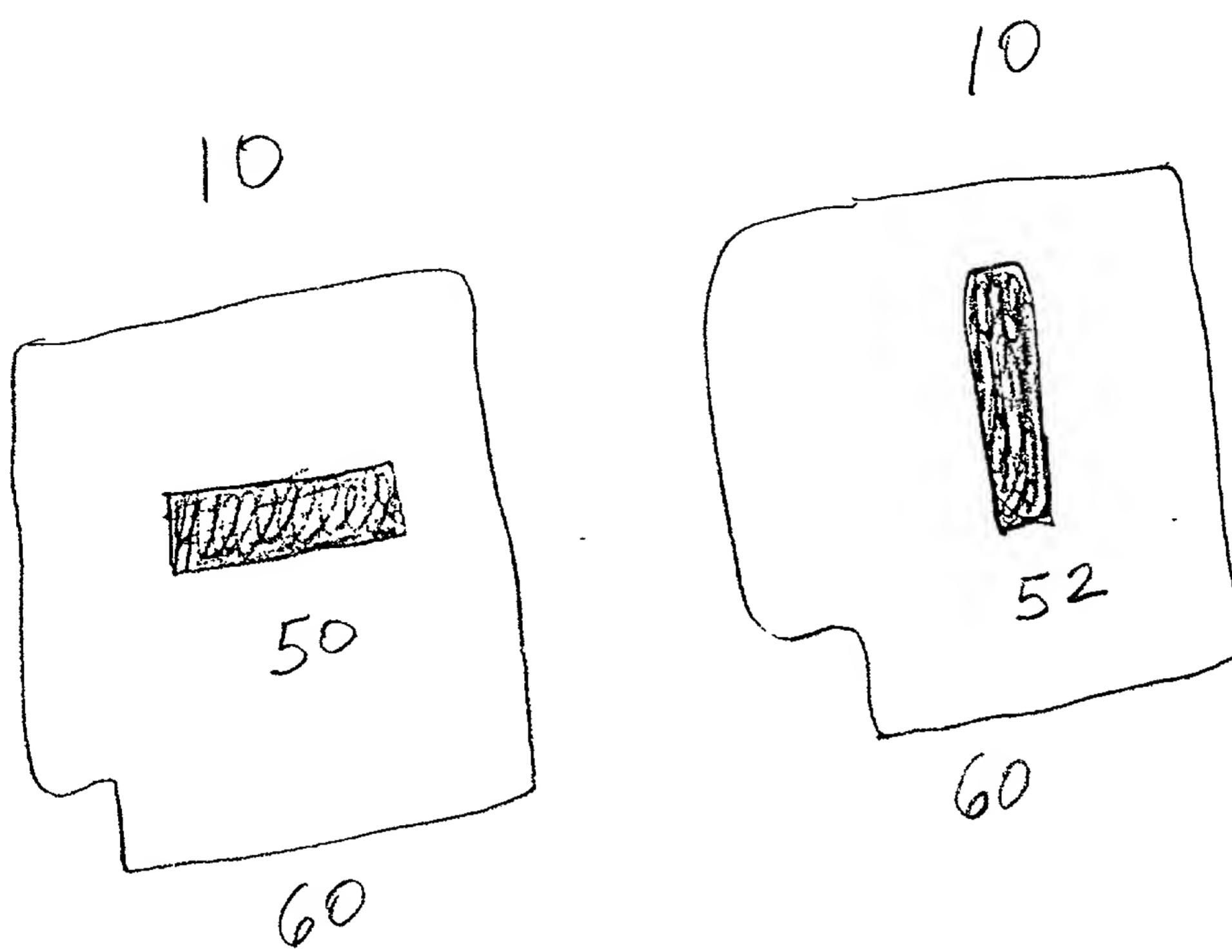
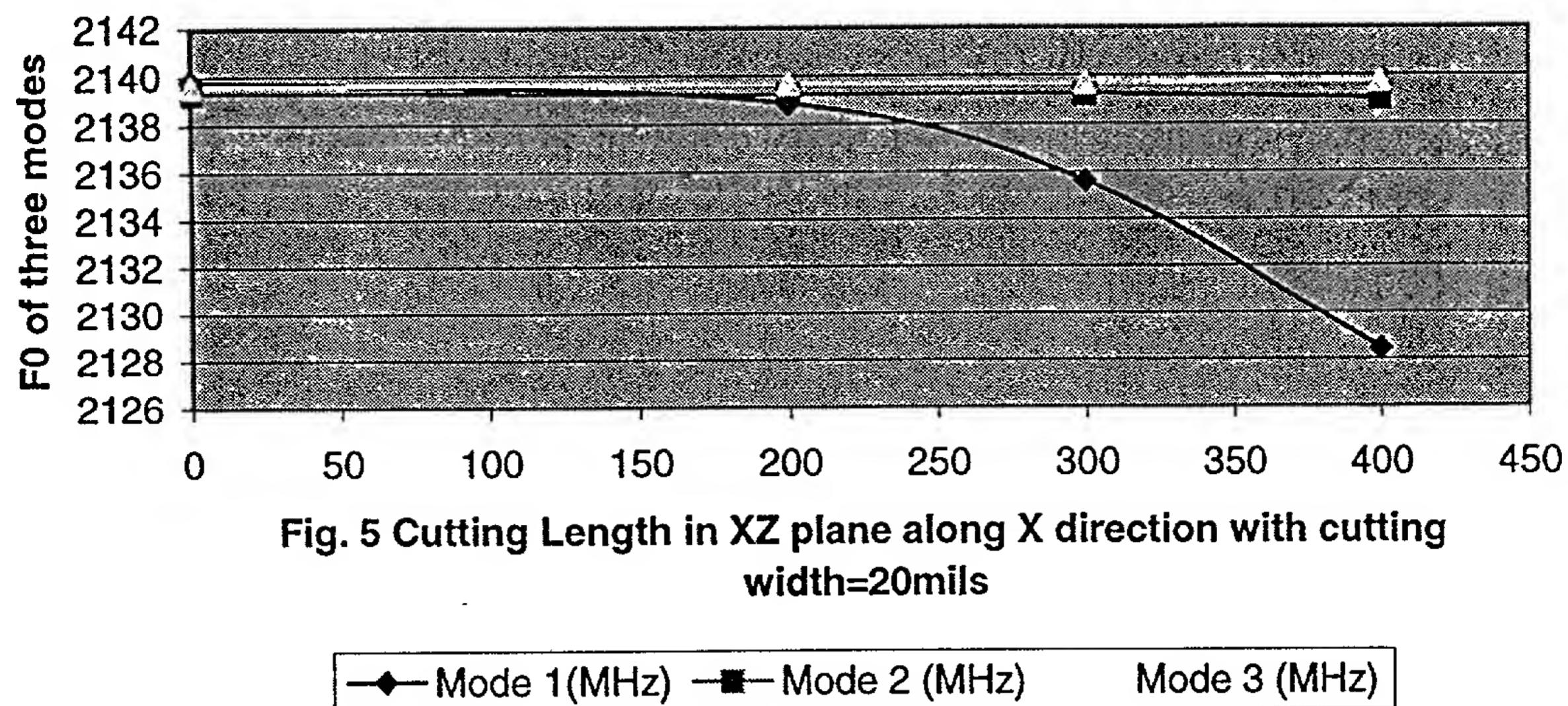


Figure 4

Resonant Frequency Shift & Cutting Length



Resonant Frequency Shift & Cutting Length

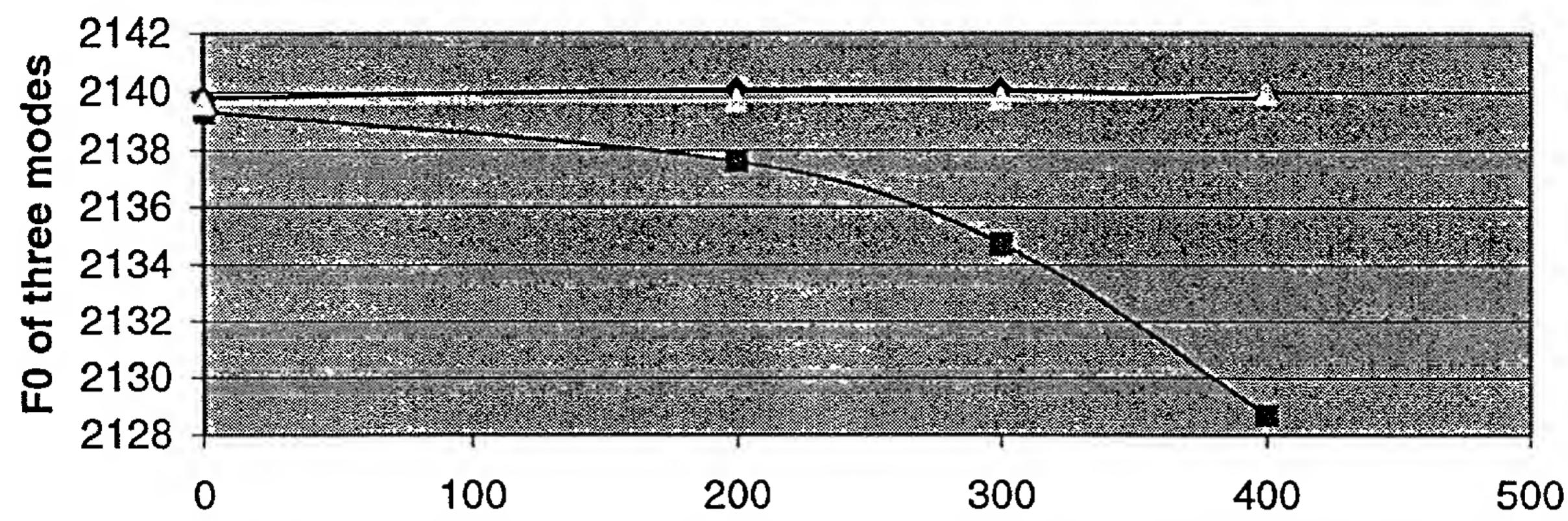


Fig. 6 Cutting Length in XY plane along X direction with cutting width=20mils

◆ Mode 1(MHz) ■ Mode 2 (MHz) ▲ Mode 3 (MHz)

Resonant Frequency Shift & Cutting Length

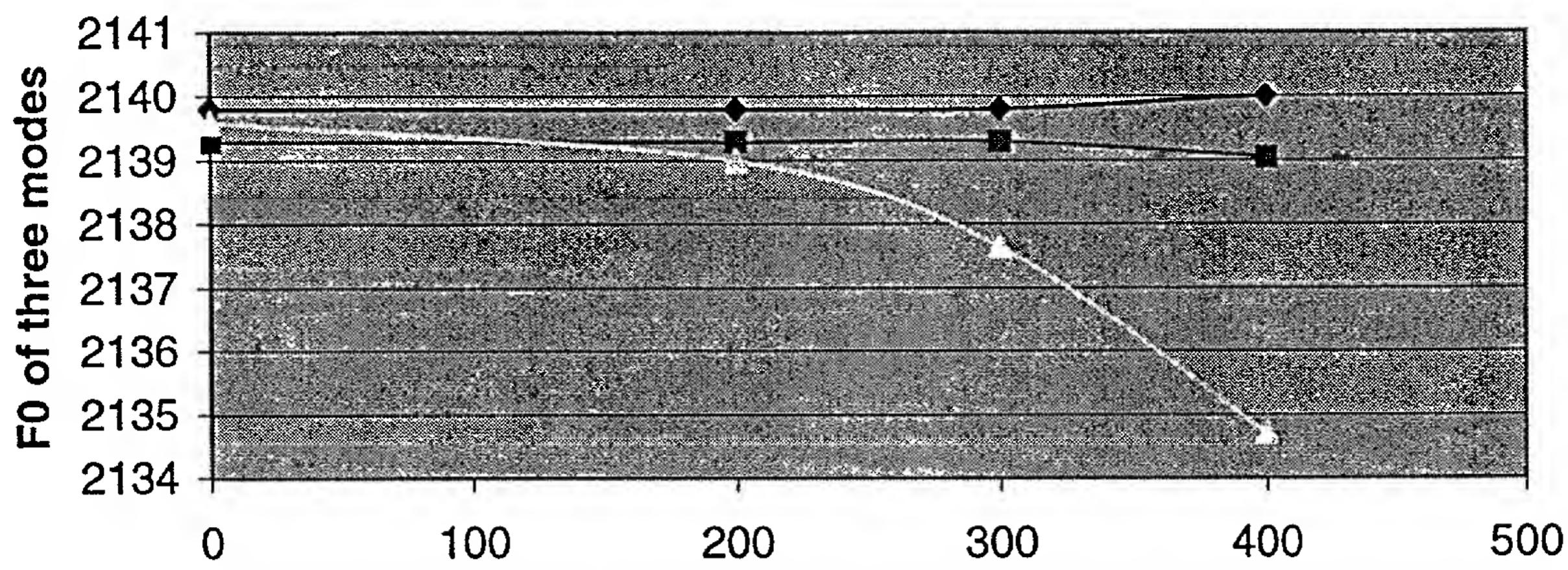


Fig. 7 Cutting Length in XY plane along Y direction with cutting width=20mils

◆ Mode 1(MHz) ■ Mode 2 (MHz) ▲ Mode 3 (MHz)

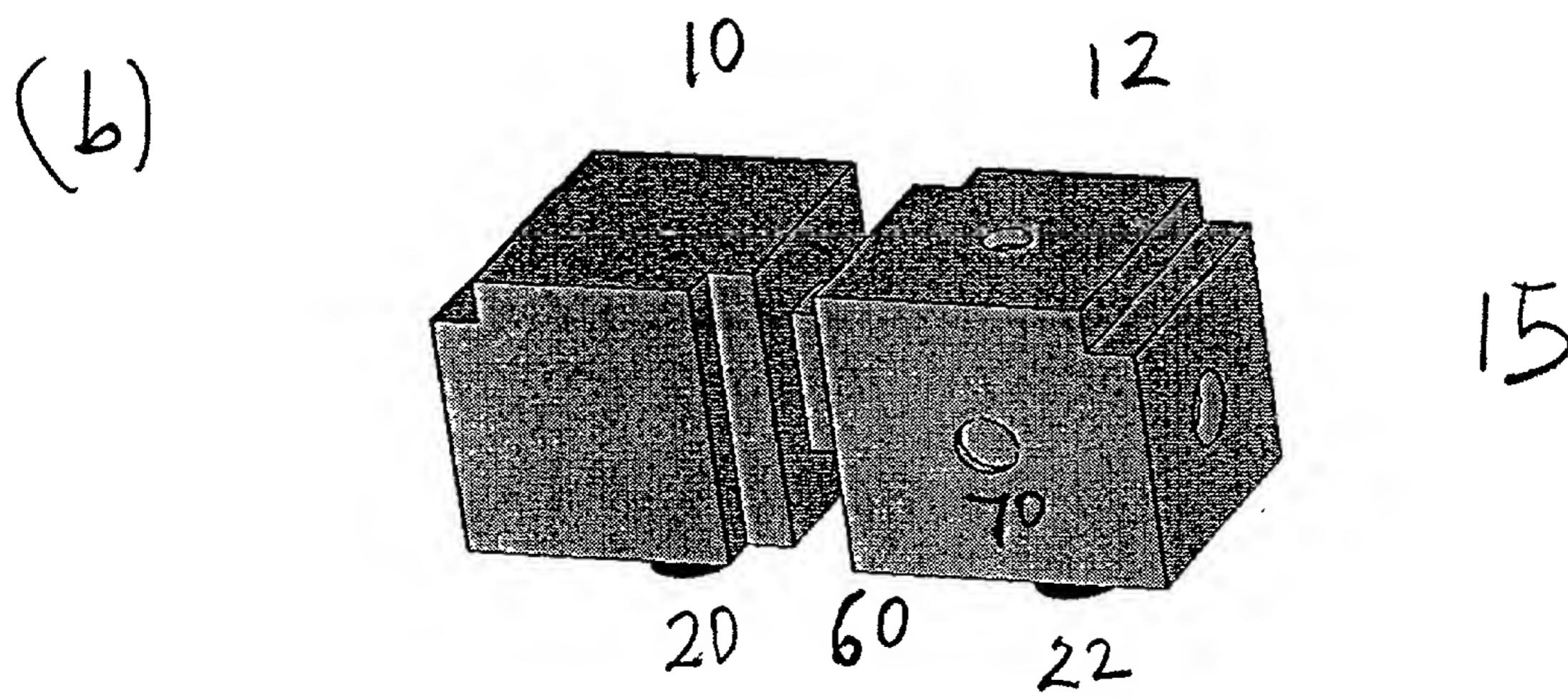
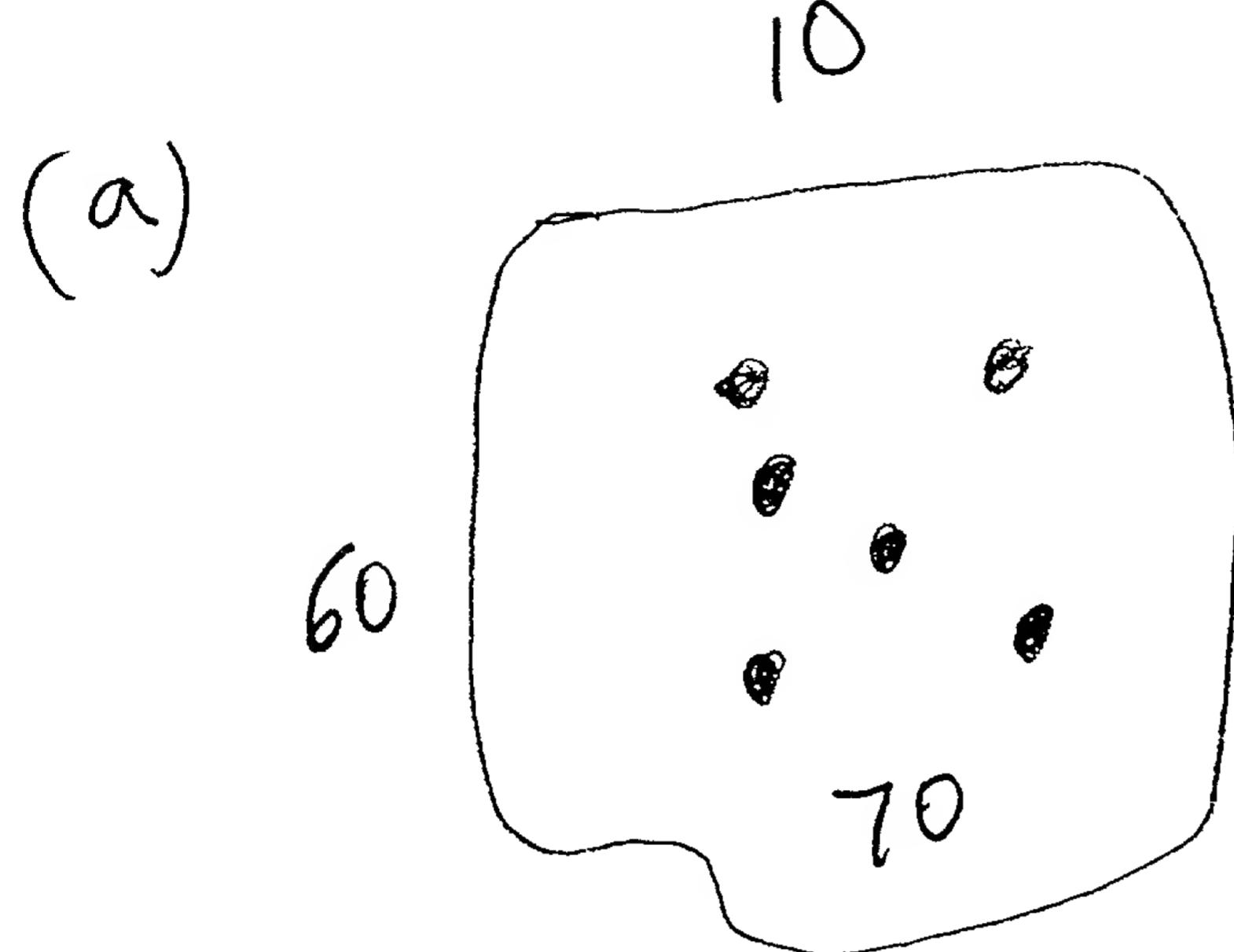


Figure 8

Resonant Frequency Shift & Cutting Numbers

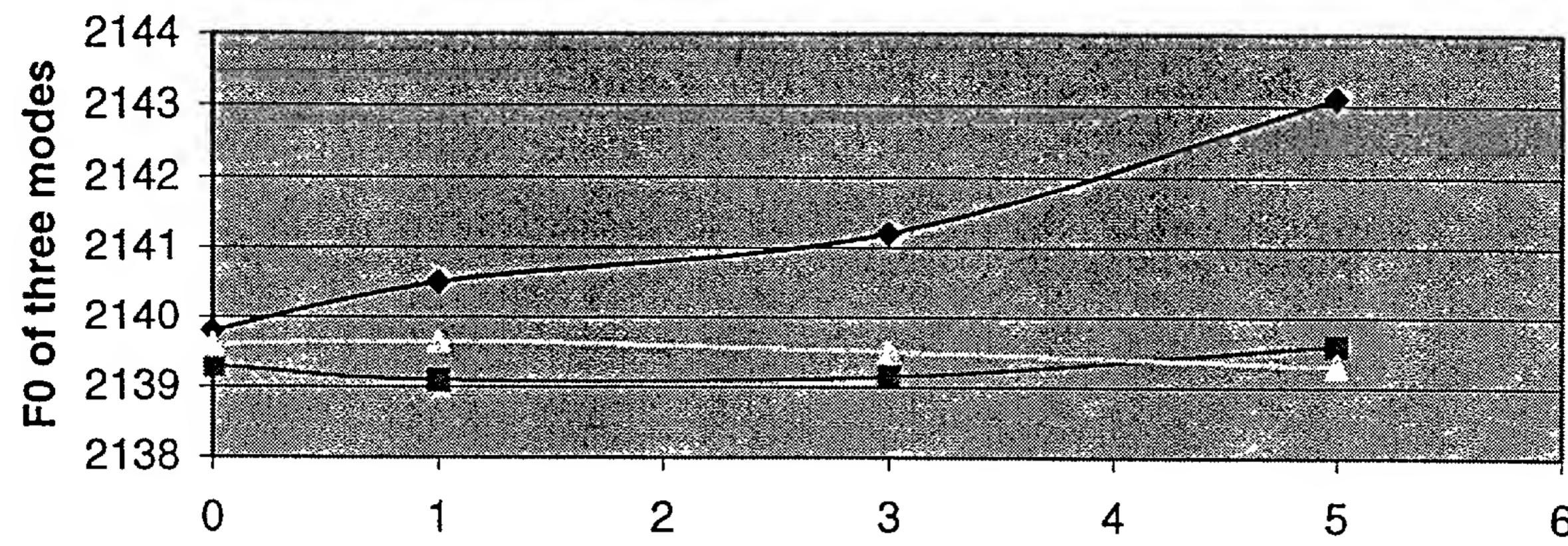
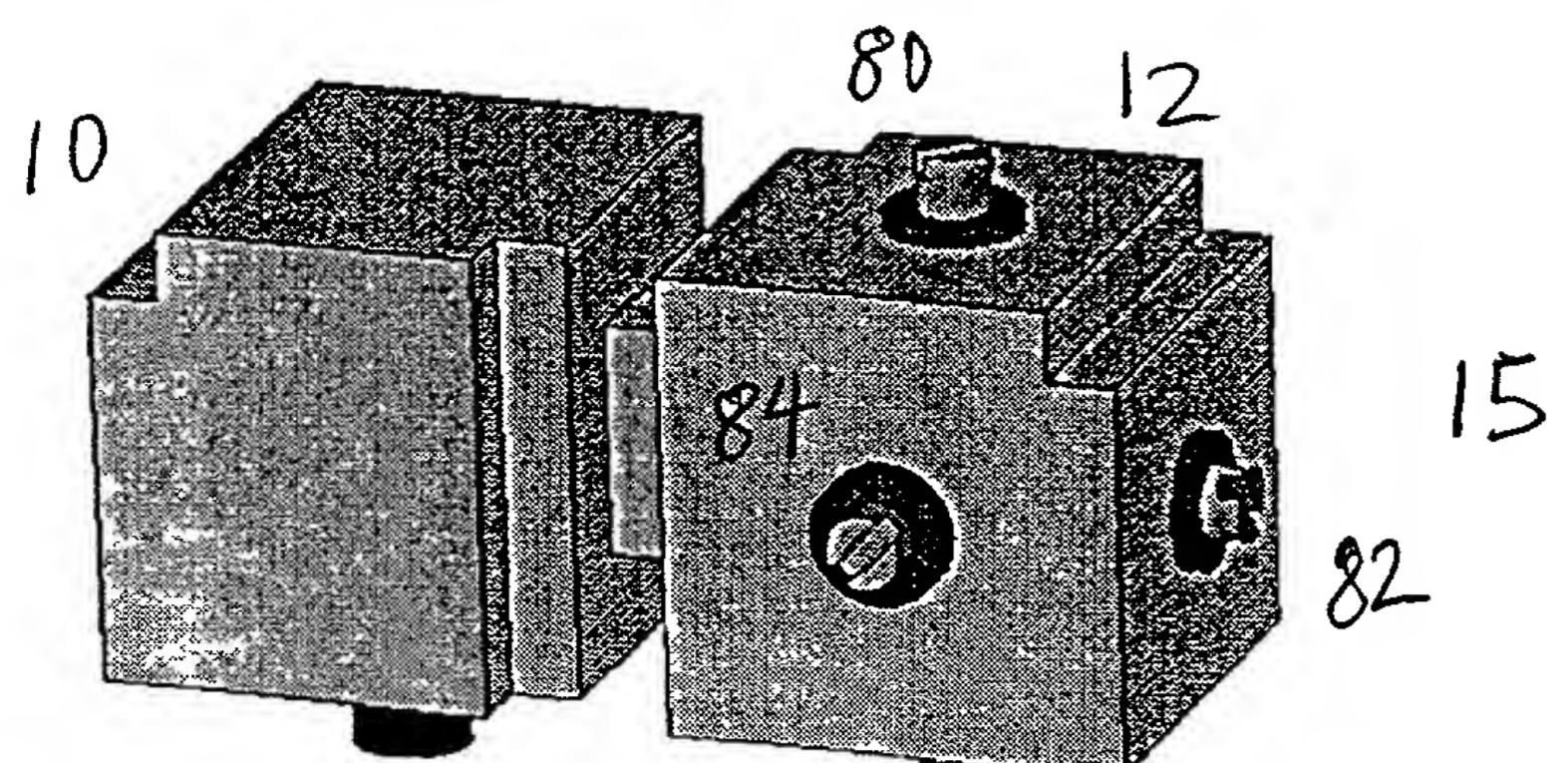


Fig. 9 Number of Circles Cutting in XY plane with cutting diameter=40mils

◆ Mode 1(MHz) ■ Mode 2 (MHz) ▲ Mode 3 (MHz)

(a)



(b)

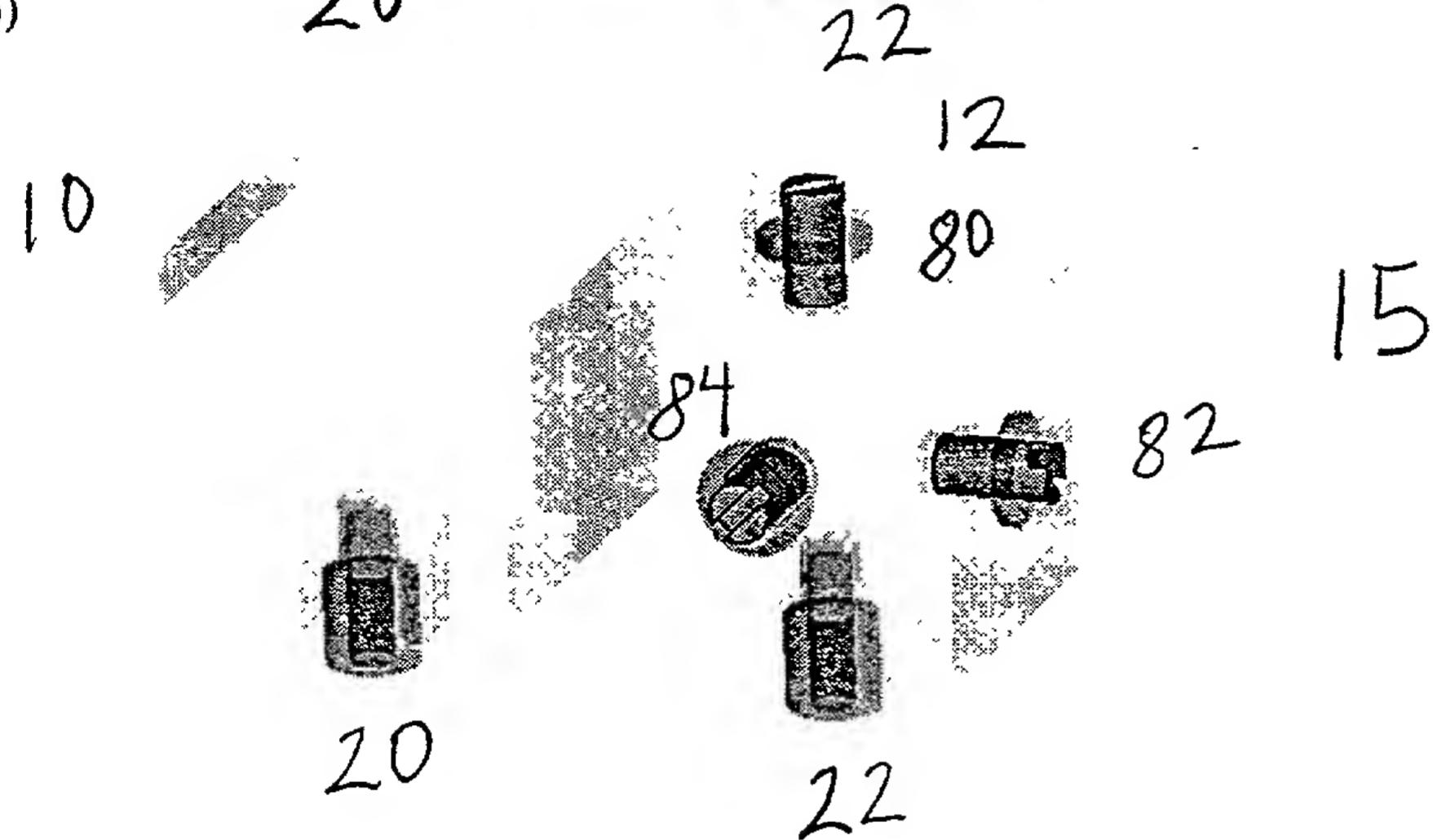


Figure 10.

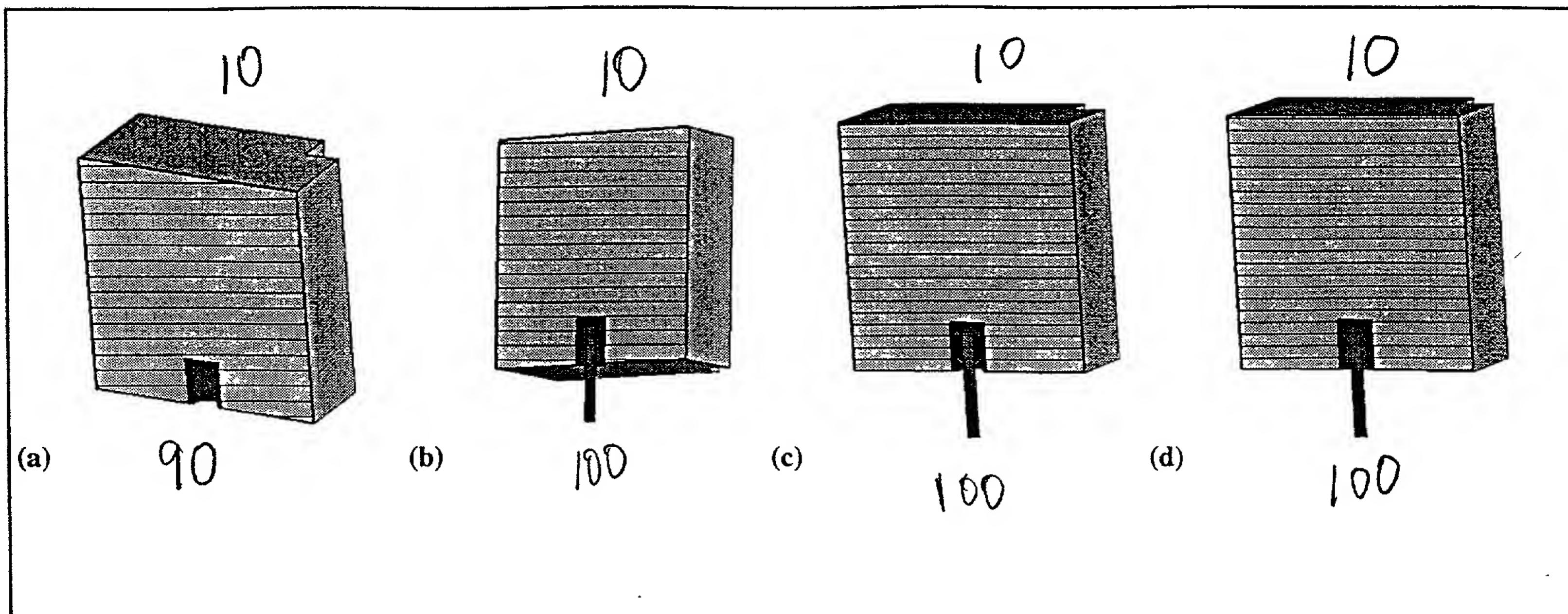
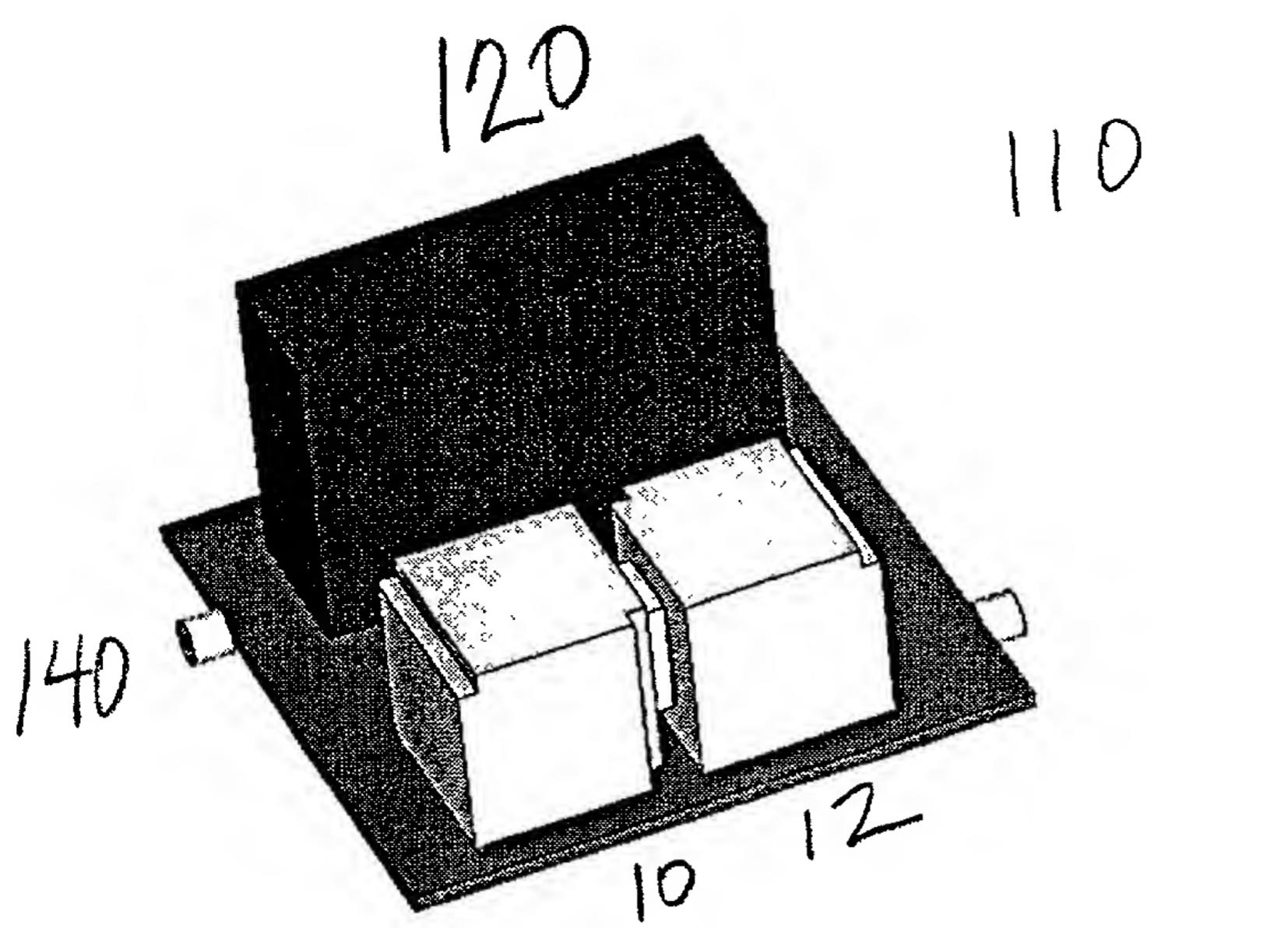
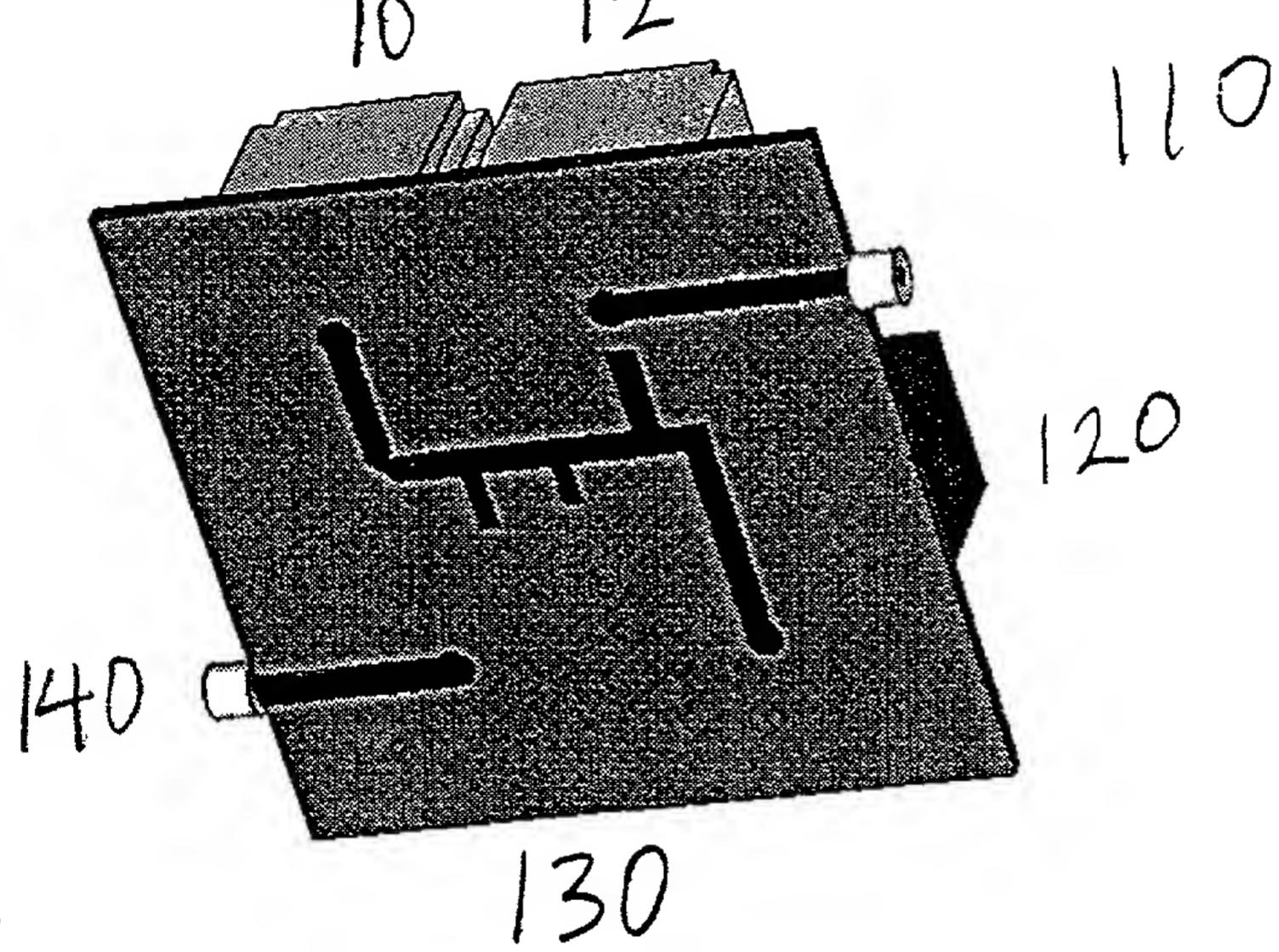


Figure 11.



(a)



(b)

Figure 12.

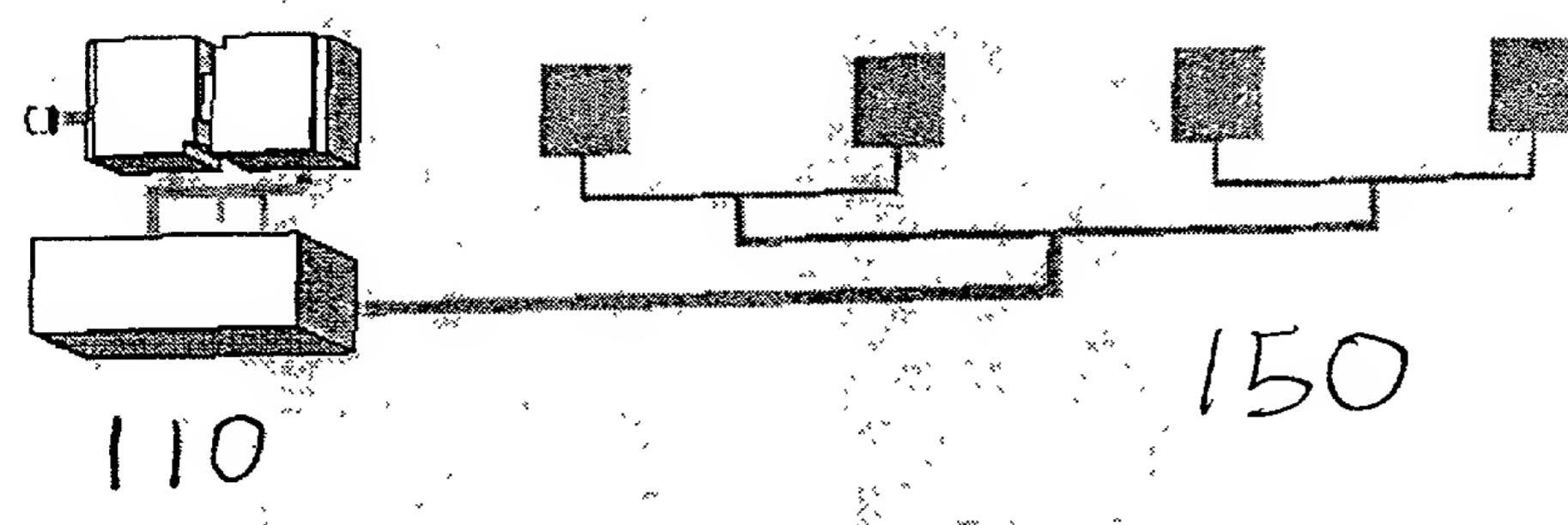


Figure 13.

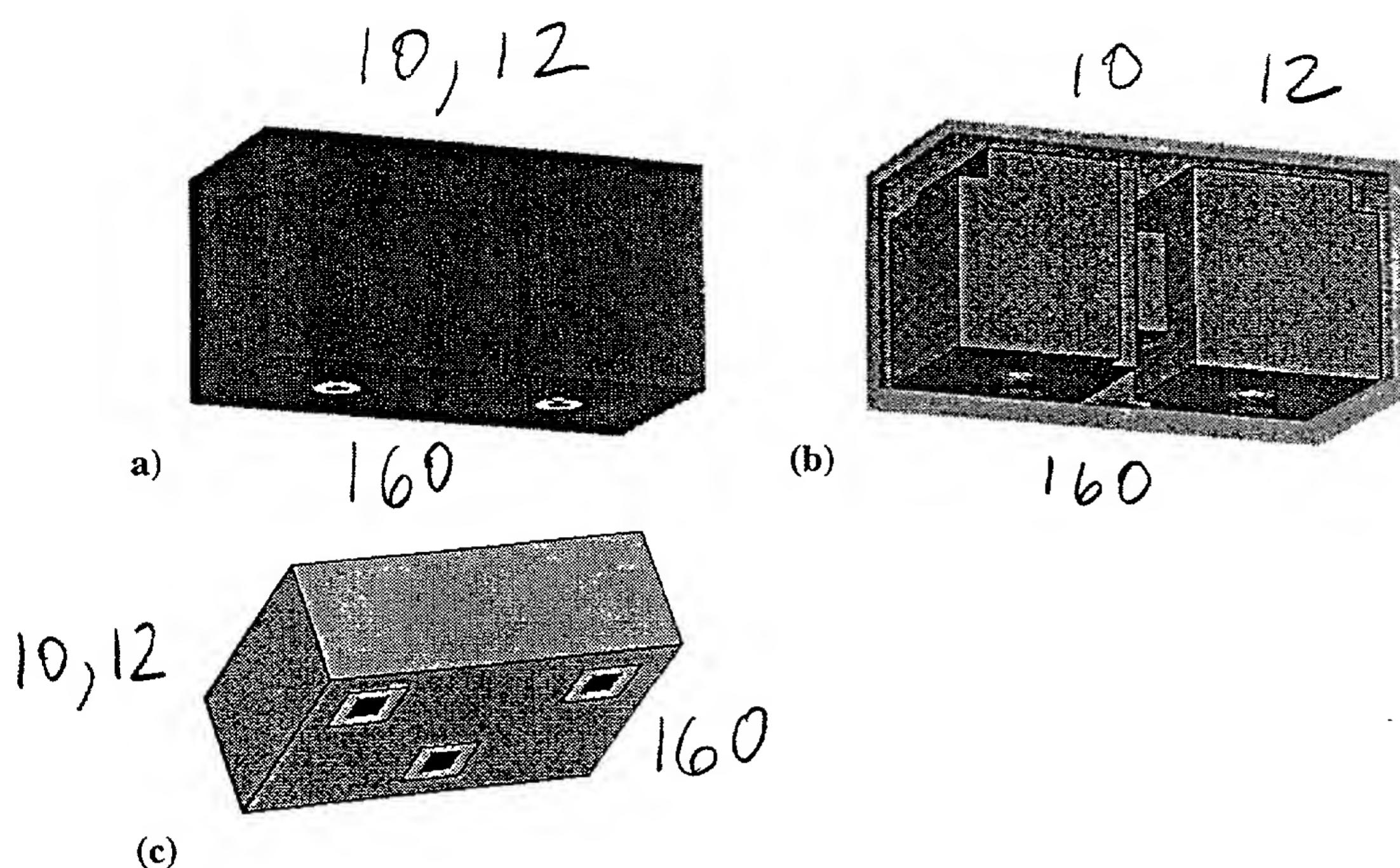
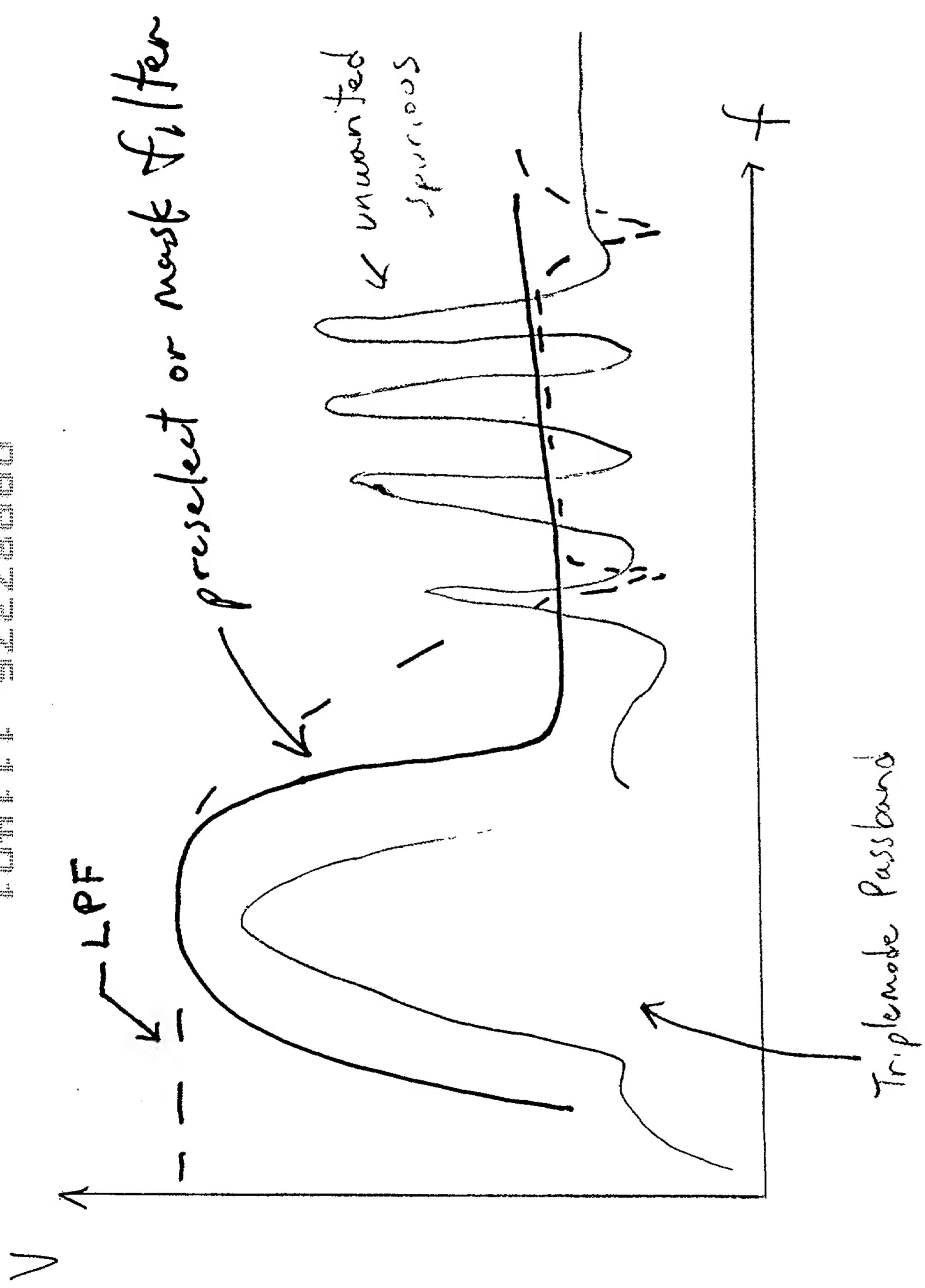


Figure 14.



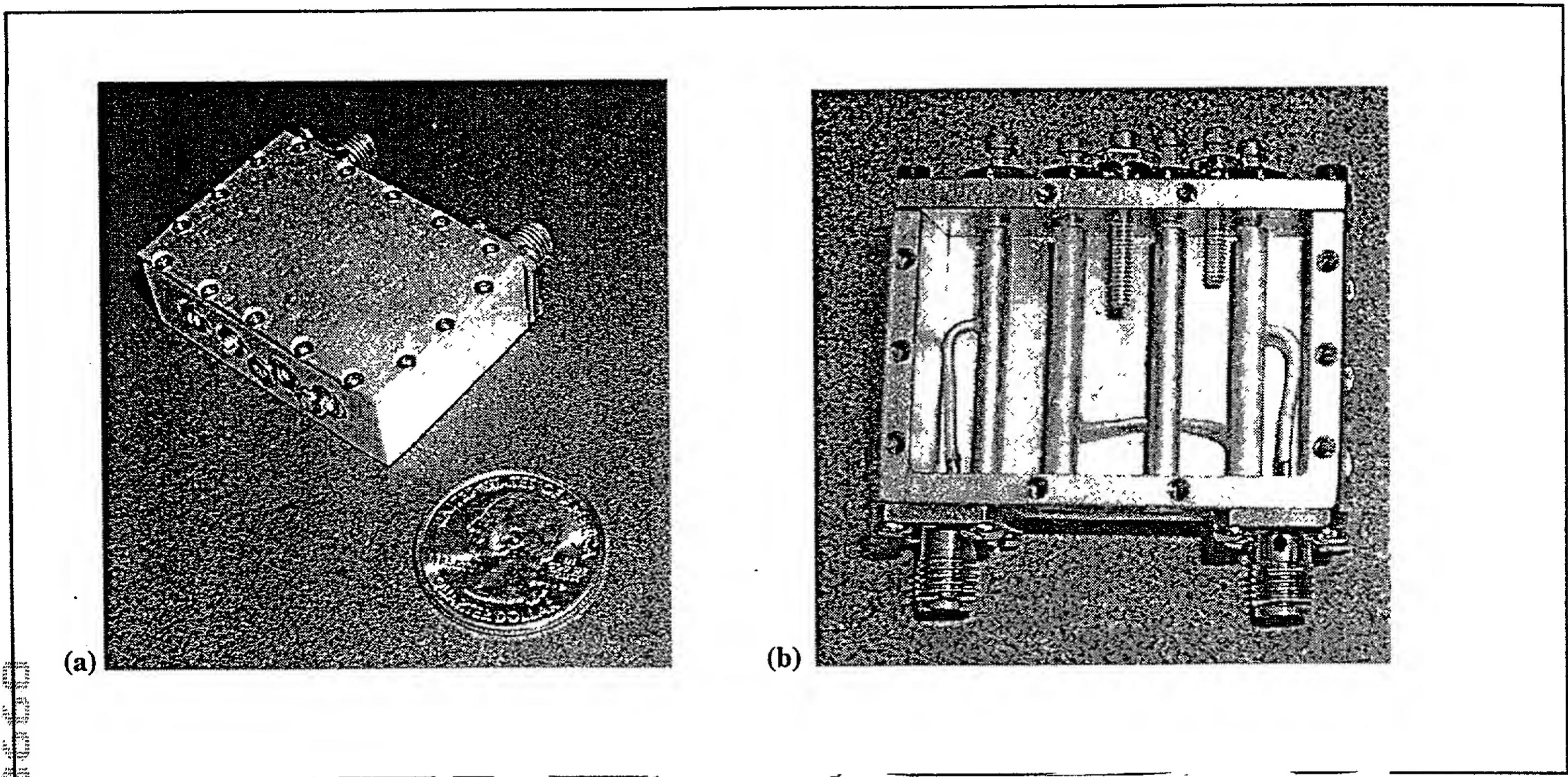


Figure 16.